

## Chapter 13

# Carbon as an Emerging Tool for Risk Management

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### ABSTRACT

*Since 2005, when the European Union Emissions Trading Scheme (EU ETS) launched, green adoption in business and industry has been marred by fraudulent carbon credits, VAT swindlers and carbon cowboys, inefficiencies of a nascent market, and not least of all by legislative uncertainty. The disrepute afforded by these examples hindered low carbon growth and deterred emerging business models from adopting more carbon friendly practices. But, as this chapter argues, the shift toward liberal environmentalism has yielded a new generation of businesses seeking to incorporate carbon assets, emissions trading, and sustainability strategies across the value chain. Central to this shift is the notion of carbon as a tool for risk management in businesses, which occurred through the instrumentalisation of CO<sub>2</sub> into a tradable asset. By utilising carbon as a financial instrument, businesses are able to manage project risk, market risk, and reputational risk more effectively. This chapter demonstrates this argument through industry examples and provides practical advice for businesses today.*

### INTRODUCTION

Since 2005, when the European Union Emissions Trading Scheme (EU ETS) launched, green adoption in business and industry has been marred by fraudulent carbon credits, VAT swindlers and

carbon cowboys, inefficiencies of a nascent market, and not least by legislative uncertainty. The disrepute afforded by these examples hindered low carbon growth and deterred emerging business models from adopting more carbon friendly practices. But, as this chapter argues, the shift toward liberal environmentalism has yielded a new generation of businesses seeking to incorporate

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carbon assets, emissions trading and sustainability strategies across the value chain. Central to this shift is the notion of carbon as a tool for risk management in businesses, which occurred through the instrumentalisation of CO<sub>2</sub> into a tradable asset. By utilising carbon as a financial instrument, businesses are able to manage project risk, market risk and reputational risk more effectively. This chapter demonstrates this argument through industry examples and provides practical advice for businesses today.

The instrumentalisation of carbon began in 1997, when the Kyoto Protocol recognized CO<sub>2</sub> as not merely hot air, but rather an internationally acknowledged financing tool for combating climate change. This led to the commoditisation of carbon as both an asset class and an instrument, tradable on commodity exchanges and transactable over-the-counter. As a result, today carbon plays host not just to the fundamental markets of the EUETS, Clean Development Mechanism (CDM) and voluntary initiatives, but also to a breadth of financial products—derivatives, indices, global exchanges, risk-based pricing instruments, insurance options—which have created entire new businesses. The ability to monetise CO<sub>2</sub> is unlocking new revenue streams in emerging business models, and moulding corporate structures to include green financing.

For those companies with project management as their core business, carbon finance risk management tools can shed light on effective techniques for managing counterparty, geographical, implementation, regulatory and financing risks. For companies with one foot already in the green sector, new carbon revenue streams and financing options provide direct access or exposure to emissions reducing projects, expanding the company's global scope. The chapter explains how to break down the risks of an emissions reducing project, but more importantly, how to apply this method of risk measurement to broader company objectives.

Companies exposed to the financial markets have a means of portfolio diversification by draw-

ing on carbon's unique position as an uncorrelated alternative asset. Energy trading companies and large industrials are already taking advantage of the hedging capability of carbon to cover exposure to oil, coal, metals, European power, natural gas, and more recently biofuels. With growing trading volumes, carbon can be similarly used to hedge currency (fx) and legislative risk by taking a position in the market and investing accordingly. Indeed, since 2005 noted peaks and troughs in the prices of underlying carbon assets (EUAs, CERs, VERs) occurred as policymakers vacillated on energy legislation, environmentally friendly heads of state were (or were not) elected and economic policy outcomes influenced industrial output, dictating the amount of CO<sub>2</sub> in the atmosphere. Managing market risk through exposure to carbon is particularly salient for industrials regulated under the EU ETS or those anticipating regulation in the US or Australasia. As in the case of early-acting utilities (such as UK power company Drax), pre-empting legislation and engaging in carbon trading during the first phase of the EU ETS helped minimise the cost of regulatory requirements later.

Reputationally, carbon is both an asset and a liability as young businesses are discovering. HSBC's success in creating a carbon neutral company and raising awareness with its clientele contrasts starkly with the early days of ExxonMobil's unsympathetic approach to climate change. The 180-degree turn of many large industrials' (Holcim, Rhodia, BP) approach to carbon has benefited them visibly from a corporate social responsibility (CSR) and a public relations perspective, positively mitigating any reputational hazard. Complementing this, companies such as the Carbon Neutral Company or—most recently—Piqqo are emerging to offset corporate social responsibility and regulatory risk, at the same time educating clients on emissions reduction. This has come most noticeably in the form of carbon offsetting and carbon footprint product labelling. Through synergies between large CO<sub>2</sub> emitting

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